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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/927,513	08/13/2001	Chul-Ho Song	SONG3005/EM/7125	5907

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BACON & THOMAS, PLLC
625 SLATERS LANE
FOURTH FLOOR
ALEXANDRIA, VA 22314

EXAMINER	
LAM, WAI YIP	

ART UNIT	PAPER NUMBER
2614	

DATE MAILED: 09/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/927,513	SONG, CHUL-HO	
	Examiner	Art Unit	
	Wai Lam	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-6 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-6 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 02282002.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Republic of Korea on 8/14/2000. It is noted, however, that applicant has not filed a certified copy of the priority documents as required by 35 U.S.C. 119(b).

Claim Objections

1. Claim 1 is objected to because of the following informalities.

With regards to the limitation that recites "a transmission means....", "the filtered modulated RF signal" should be changed to "the filtered modulated RF signal from the first filtering means" to avoid confusion that the cable modem transmits a filtered and non-filtered modulated RF signal, which is contradictive to Figure 2.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claim 1, 3, 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of U.S. Patent No. 5,581,555 (Dubberly et al.)

As to claim 1, the admitted prior art teaches a system for providing a multi-Internet connection in a cable network system (Figure 1, page 5, lines 15 – 26, page 6, lines 1 - 16).

The admitted prior art also teaches a first and a second cable modem for modulating digital data signal from subscribers to radio frequency signal (Page 5, lines 7 – 8).

The admitted prior art also teaches a transmission means for transmitting the modulated RF signal from the second cable modem (Unit 50 in Figure 1 of present application, (Page 6, lines 1 – 5).

The admitted prior art also teaches a transmission means for transmitting the modulated RF signal from the second cable modem (Figure 1 of present application)

The admitted prior art also teaches a second CMTS (Unit 200 in Figure 1 of present application) for demodulating the transmitted modulated RF signal back to the digital data signal and scanning the digital data signal (Page 4, line 12, Page 5, lines 8 – 10) and identifying a registered subscriber to thereby connect the subscriber to a corresponding host server (Page 6, lines 3 – 14).

The admitted prior art fails to teach a first filtering means, connected to the first cable modem, for filtering the modulated RF signal from the first CM.

The admitted prior art also fails to teach a transmission means for transmitting the filtered modulated signal from the first cable modem.

The admitted prior art also fails to teach a second filtering means, connected to the transmission means, for filtering the modulated RF signal transmitted through the transmission means to thereby pass the filtered modulated RF signal from the first filtering means.

The admitted prior art also fails to teach a first cable modem termination system (CMTS), for demodulating the filtered modulated RF signal filtered by the second filtering means back to the digital data signal, scanning the digital data signal and identifying a registered subscriber to thereby connect the subscriber to a corresponding host server.

However, Dubberly et al. teaches a first filtering means (Unit 430 in Figure 12 of Dubberly et al.), connected to the first CM (Everything left of Unit 425 in Figure 12 of Dubberly et al.), for filtering the modulated RF signal from the first CM (Column 25, lines 44 - 46). Everything left of Unit 425 in Figure 12 of Dubberly et al. is considered a cable modem because it is an interface device connected to a coaxial cable network that modulates and demodulates signals.

Dubberly et al. also teaches a transmission means for transmitting the filtered modulated signal from the first filtering means (Column 25, lines 44 – 46).

Dubberly et al. also teaches a second filtering means (Unit 325 in Figure 11 of Dubberly et al.), connected to the transmission means (Unit 22 in Figure 1 of Dubberly et al.), for filtering the modulated RF signal transmitted through the

transmission means to thereby pass the filtered modulated RF signal from the first filtering means (Column 23, lines 13 - 21).

Since Dubberly et al. teaches a first and second filtering means as discussed above, the transmitted modulated RF signal demodulated by the first CMTS must be a filtered modulated RF signal. Furthermore, the admitted prior art teaches a first CMTS for demodulating the transmitted modulated RF signal back to digital data signal, scanning the digital data signal and identifying a registered subscriber to thereby connect the subscriber to a corresponding host server (Page 6, lines 3 – 14).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the admitted prior art system, using the filtering means of Dubberly et al., for the purpose of sharing and splitting the limited upstream bandwidth in order to maximize the number of subscribers that can utilize the system without contention for the shared resource (Column 5, lines 49 – 64).

As to claim 2, Dubberly et al. teaches the limitations of claim 1 as discussed above. Dubberly et al. also teaches the first (Unit 430 in Figure 12) and the second filtering means (Unit 325 in Figure 11) are high pass filters, respectively. Units 430 and 325 are diplex filters that contains high pass filters, therefore, they read on to the claimed filtering means that are high pass filters.

As to claim 3, Dubberly et al. teaches the limitations of claim 1 as discussed above. Dubberly et al. also teaches the first (Unit 430 in Figure 12)

and the second filtering means (Unit 325 in Figure 11) are band pass filters, respectively. Units 430 and 325 are diplex filters that passes certain bands of frequencies in the frequency spectrum, therefore, they read on to the claimed band pass filters.

As to claim 6, see rejection of claim 1 and note that Dubberly et al. also teaches the transmission means is a hybrid coaxial cable (Column 2, lines 3 – 11, Figure 1).

3. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art in view of U.S. Patent No. 5,581,555 (Dubberly et al.) as applied to claims 1, 2, 3 and 6 above, and further in view of U.S. Patent No. 5,493,261 (Kitoh et al.)

As to claim 4, Dubberly et al. teaches the limitations of claims 1 and 2 as discussed above.

Dubberly et al. fails to teach the first and the second filtering means are 32 MHz high pass filters.

However, Kitoh et al. teaches a high pass filter wherein the frequency characteristics can be easily adjusted (Column 4, lines 33 – 64). This reads on to the claimed first and second filtering means are 32 MHz high pass filters.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the diplex filters of Dubberly et al., using the frequency adjustable high pass filters of Kitoh et al., for the purpose of

eliminating mismatching loss due to stray capacitances and allowing the desired filter frequency characteristic to be readily achieved (Column 1, lines 41 – 45, Column 2, lines 40 – 41).

As to claim 5, Dubberly et al. teaches the limitations of claims 1 and 3 as discussed above.

Dubberly et al. fails to teach the first and the second filtering means are 16 - 32 MHz band pass filters.

However, Kitoh et al. teaches a band pass filter wherein the frequency characteristics can be easily adjusted (Column 4, lines66 – 67, Column 5, lines 1 – 37). This reads on to the claimed first and second filtering means are 16 - 32 MHz band pass filters.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art, to modify the diplex filters of Dubberly et al., using the frequency adjustable band pass filters of Kitoh et al., for the purpose of eliminating mismatching loss due to stray capacitances and allowing the desired filter frequency characteristic to be readily achieved (Column 1, lines 41 – 45, Column 2, lines 40 – 41).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,169,569 (Widmer et al.) teaches a high pass and band pass filter at the cable modem. U.S. Patent No. 6,360,369 (Mahoney) teaches a band pass filter at the CMTS. U.S. Patent No. 3,924,187 (Dormans) teaches two filtering means attached to the head-end and the client terminal, respectively. U.S. Patent No. 6,804,262 (Vogel et al.) teaches a band pass filter in the cable modem.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Wai Lam whose telephone number is (571) 272-2827. The examiner can normally be reached on Monday - Friday 7:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jason Salce
9-1-05

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